

Appendix D

404 (b) (1) Analysis

Jordan Creek FRM Study, Springfield, MO.
 Appendix D: 404 (b) (1) Analysis

SHORT-FORM
 Evaluation of Section 404(b)(1) Guidelines

Formal review should follow close of public notice comment period.

APPLICANT: Jordan Creek Flood RMS Springfield, Missouri

APPLICATION NUMBER: N/A

1. Review of Compliance (Section 230.10(a)-(d)).
 A review of the permit application indicates that:

Preliminary 1/ Final 2/

- a. The discharge represents the least environmentally damaging practicable alternative and if in a special aquatic site, the activity associated with the discharge must have direct access or proximity to, or be located in the aquatic ecosystem to fulfill its basic purpose (if no, see section 2 and information gathered for EA alternative);..... YES NO * YES NO
- b. The activity does not appear to: 1) violate applicable state water quality standards or effluent standards prohibited under Section 307 of the CWA; 2) jeopardize the existence of Federally listed endangered or threatened species or their habitat; and 3) violate requirements of any Federally designated marine sanctuary (if no, see section 2b and check responses from resource and water quality certifying agencies);..... YES NO * YES NO
- c. The activity will not cause or contribute to significant degradation of waters of the United States including adverse effects on human health, life stages of organisms dependent on the aquatic ecosystem, diversity, productivity and stability, and recreational, aesthetic, and economic values (if no, see section 2);..... YES NO * YES NO
- d. Appropriate and practicable steps have been taken to minimize potential adverse impacts of the discharge on the aquatic ecosystem (if no, see section 5). YES NO * YES NO
- *1/, 2/ See page 3.

2. Technical Evaluation Factors (Subparts C-F).

N/A Not Significant Significant

a. Physical and chemical characteristics of the Aquatic Ecosystem (Subpart C-F)

- 1) Substrate impacts.
- 2) Suspended particulates/turbidity impacts.
- 3) Water column impacts.
- 4) Alteration of current patterns and water circulation.
- 5) Alteration of normal water fluctuations/hydroperiod.
- 6) Alteration of salinity gradients.

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b. Biological Characteristics of the Aquatic Ecosystem (Subpart D).

- 1) Effect on threatened/endangered species and their habitat.
- 2) Effect on the aquatic food web.
- 3) Effect on other wildlife(mammals, birds, reptiles, amphibians)

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c. Special Aquatic sites (Subpart E).

- 1) Sanctuaries and refuges.
- 2) Wetlands.
- 3) Mud flats.
- 4) Vegetated shallows.
- 5) Coral reefs.
- 6) Riffle and pool complexes.

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d. Human Use Characteristics (Subpart F).

- 1) Effects on municipal and private water supplies.
- 2) Recreational and Commercial fisheries impacts.
- 3) Effects on water-related recreation.
- 4) Aesthetic impacts.
- 5) Effects on parks, national and historical monuments, national seashores, wilderness areas, research sites, similar preserves.

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Remarks: Where a check is placed under the significant category, preparer add explanation below.

3. Evaluation of Dredged or Fill Material (Subpart G). 3/

a. The following information has been considered in evaluating the biological availability of possible contaminants in dredged or fill material. (Check only those appropriate.)

- 1) Physical characteristics.....
- 2) Hydrography in relation to known or anticipated sources of contaminants.....
- 3) Results from previous testing of the material or similar material in the vicinity of the project.....
- 4) Known, significant, sources of persistent pesticides from land runoff or percolation.....
- 5) Spill records for petroleum products or designated (Section 311 of CWA) hazardous substances.....
- 6) Other public records of significant introduction of contaminants from industries, cities or other sources.....
- 7) Known existence of substantial material deposits of substances which could be released in harmful quantities to the aquatic environment by man-induced discharge activities.....
- 8) Other sources (specify).....

List appropriate references (attach sheet if necessary).

b. An evaluation of the appropriate information in 3a above indicates that there is reason to believe the proposed dredge or fill material is not a carrier of contaminants, or that levels of contaminants are substantively similar at extraction and that the dredged material will be constrained and not allowed to flow beyond the boundaries of the disposal site. The material meets the testing exclusion criteriaYES NO

4. Disposal Site Delineation (Section 230.11(f)).

a. The following factors, as appropriate, have been considered in evaluating the disposal site

- 1) Depth of water at disposal site.....
- 2) Current velocity, direction, and variability at disposal site.....
- 3) Degree of turbulence.....
- 4) Water column stratification.....
- 5) Discharge vessel speed and direction.....
- 6) Rate of discharge.....
- 7) Dredged material characteristics (constituents, amount, and type of material, settling velocities)
- 8) Number of discharges per unit of time.....
- 9) Other factors affecting rates and patterns of mixing (specify).....

List appropriate references (attach sheet if necessary).

b. An evaluation of the appropriate factors in 4a above indicates that the disposal site and/or size of mixing zone are acceptable.....YES NO

5. Actions to Minimize Adverse Effects (Subpart H).

All appropriate and practicable steps have been taken, through application of recommendation of Section 230.70-230.77 to ensure minimal adverse effects of the proposed discharge.

List actions taken. (attach sheet if necessary).....YES NO

N.B. Return to section 1 for final stage of compliance review. See also note 3/, page 3.

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6. Factual Determination (Section 230.11).

A review of appropriate information as identified in items 2-5 above indicates that there is minimal potential for short or long-term environmental effects of the proposed discharge as related to:

- a. Physical substrate at the disposal site (review sections 2a, 3, 4, encl 5 above).....YES NO
- b. Water circulation, fluctuation and salinity (review sections 2a, 3, 4, and 5).....YES NO
- c. Suspended particulates/turbidity (review sections 2a, 3, 5, and 6).....YES NO
- d. Contaminant availability (review sections 2a, 3, and 4).....YES NO
- e. Aquatic ecosystem structure and function (review sections 2b and c, 3, and 5).....YES NO
- f. Disposal site (review sections 2, 4, and 5).....YES NO
- g. Cumulative impact on the aquatic ecosystem.....YES NO
- h. Secondary impacts on the aquatic ecosystem.....YES NO

7. Evaluation Responsibility (*See page 3).

a. This evaluation was prepared by:

Jim Ellis
Position: Biologist
Date: 12 March 2013

b. This evaluation was reviewed by:

Dana Coburn
Position: Chief, Environmental Branch
Date: 18 April 2013

8. Findings.

a. The proposed disposal site for discharge of dredged or fill material complies with the Section 404(b)(1) guidelines.....

b. The proposed disposal site for discharge of dredged or fill material complies with the Section 404(b)(1) guidelines with the inclusion of the following conditions: (attach sheet if necessary).....

c. The proposed disposal site for discharge of dredged or fill material does not comply with the Section 404(b)(1) guidelines for the following reason(s):

- 1) There is a less damaging practicable alternative.....
- 2) The activity:
 - violates applicable state water quality standards.....
 - jeopardizes a Federally listed endangered or threatened species.....
 - violates requirements of a Federally designated marine sanctuary.....
- 3) The proposed discharge will result in significant degradation of the aquatic ecosystem.....
- 4) The proposed discharge does not include all practicable and appropriate measures to minimize potential harm to the aquatic ecosystem.....

SIGNATURE

Dana O. Coburn
Patricia Anslow
for Chief, Planning and Environmental Division

* A negative, significant, or unknown response indicates that the permit application may not be in compliance with the Section 404(b)(1) Guidelines.

1/ Negative responses to three or more of the compliance criteria at this stage indicate that the proposed projects may not be evaluated using this "short term procedure." Care should be used in assessing pertinent portions of the technical information of items 2 a thru d below before completing the final review of compliance.

2/ Negative response to one of the compliance criteria at this stage indicates that the proposed project does not comply with the guidelines. If the economics of navigation and anchorage of Section 404(b)(2) are to be evaluated in the decision-making process, the "short form evaluation process is inappropriate."

3/ If the dredged or fill material cannot be excluded from individual testing, the "short-form" evaluation process is inappropriate.